



LITHIUM BLUE Battery

Coming Spring 2021

Discover® LITHIUM BLUE LiFePO₄ Premium Series batteries offer BMS controlled safety, long life, lightning fast charging performance and real-time Bluetooth access to battery State of Charge, voltage, current, temperature status. LITHIUM BLUE batteries reflect Discover's Design for Excellence philosophy, incorporating suitcase style carrying handles, terminal protection and field serviceable fuses. LITHIUM BLUE batteries are safe, easily to install and parallel for more capacity.

FEATURES

BLUETOOTH APP

- State of Charge
- Voltage / Current
- Temperature °F/°C

HIGH-CURRENT BMS

- Field replaceable fuse protection

BENEFITS

ENHANCED RUNTIME

- Double the high-current runtime of lead-acid battery
- Up to 100% usable capacity
- Up to 100% Depth of Discharge

EXTENDED SERVICE LIFE

- 10x the life of lead-acid battery (BCI-06)
- Unlimited Partial State of Charge cycles
- Energy throughput warranty

FAST CHARGING

- Up to 5x faster than new lead-acid batteries
- Up to 10x faster than aged lead-acid batteries
- 2x faster than C/2 rated lithium batteries
- Opportunity charge at 1C rate anytime, regardless of SoC

SURGE POWER

- Surge power for inverter chargers
- Up to 3C peak power discharge rate
- Up to 1C continuous discharge rate

HIGH-EFFICIENCY

- Up to 50% more energy efficient than a lead-acid battery
- Up to 98% round-trip efficiency

PARALLEL POWER

- Easy to parallel more capacity
- Linear scaling of charge, discharge and peak capacity

QUICK INSTALL

- Fast installation. No special tools
- Drop-in lead-acid replacement

RELIABLE AND SAFE

- LiFePO₄ is safe
- Maintenance-free
- UL94 V0 flame retardant case and cover
- IP 67 rated

CERTIFIED QUALITY

Discover® manufacturing facilities are fully certified to ISO 9001/14001 and OSHA 18001 standards.

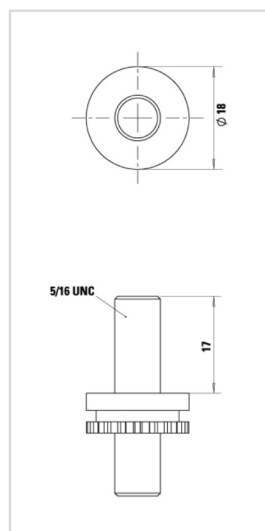
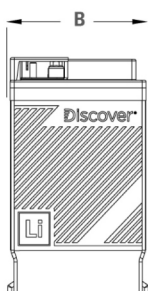
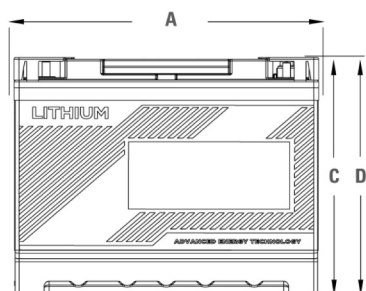
CERTIFICATION STANDARDS

- CE
- UN 38.3

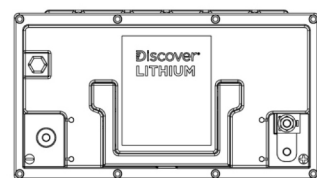
SHIPPING CLASSIFICATION

- UN 3480, Class 9 (Lithium batteries)

MECHANICAL DRAWINGS



TERMINAL



MECHANICAL SPECIFICATIONS

Industry Reference	BCI: GC12 DIN: Tall H7	
Length A (in/mm)	12.2	312
Width B (in/mm)	7.0	177
Height C (in/mm)	10.9	276
Total Height D (in/mm)	10.9	276
Weight (lbs/kgs)	44.1	20.0
Terminal*	ST 5/16	
Cell(s)	4S2P	
Case Material	UL94-V0 PBT/PC	
IP Rating	67	
Electrolyte	LiFePO ₄	

*TERMINAL TORQUE: 13 Nm / 9.6 ft-lb

ELECTRICAL SPECIFICATIONS

Open Circuit Voltage (V)	12.8
Charge Voltage (Bulk Vdc)	13.8 - 14.2
Max Absorption Voltage (U1 Vdc)	13.8
Float Voltage (U2 Vdc)	13.6
BMS Max. Voltage protection (Vdc)	14.6
Suggested Low Voltage Cutoff (Vdc) *	12
BMS Min. Voltage protection (Vdc)	10.0
Max. Continuous Charge Current (I Max. Adc)	150
Min. Finishing Charge Current (I Min. Adc)	2%-3% C1 / Min. 200ma
Max Continuous Discharge Current (Adc)	150
Max. Peak Current (Adc)	250
Self Discharge (25°C / 77°F)	< 3% per month
Charge Temperature	Min: 0°C (32°F) Max: 55°C (131°F)
Discharge Temperature	Min: -20°C (-4°F) Max: 60°C (140°F)
Storage Temperature	Min: -10°C (14°F) Max: 30°C (86°F)

Electrical Specifications at 25°C.

CAUTION: Extra considerations must be given to depths of discharge, operating voltages and currents when designing systems for use at maximum operating temperatures.

CAUTION: Do not exceed maximum voltage at the battery terminals (Bulk Vdc)

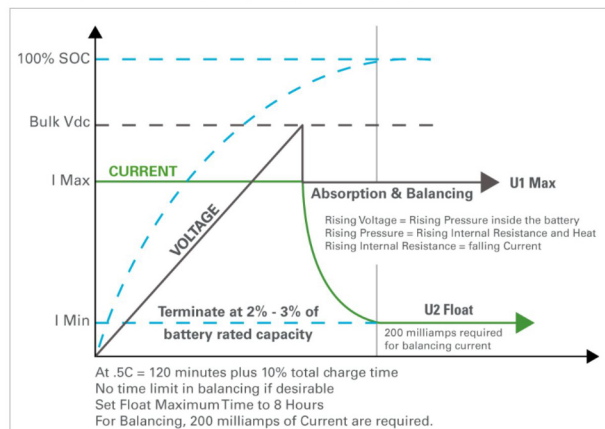
*NOTE: 98% of battery capacity is delivered above 3Vpc (12V, 24V, 36V and 48V models)

PERFORMANCE SPECIFICATIONS

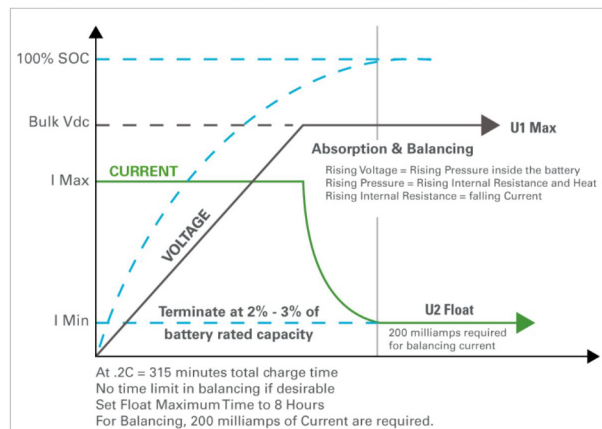
Nominal Energy (kWh)	2.56
Useable DoD	100%
Rated Wh Capacity (1C)	2560
Rated Ah Capacity (1C)	200

Minutes of Discharge				
@25A	@56A	@75A	@85A	@100A
480	214	160	141	120

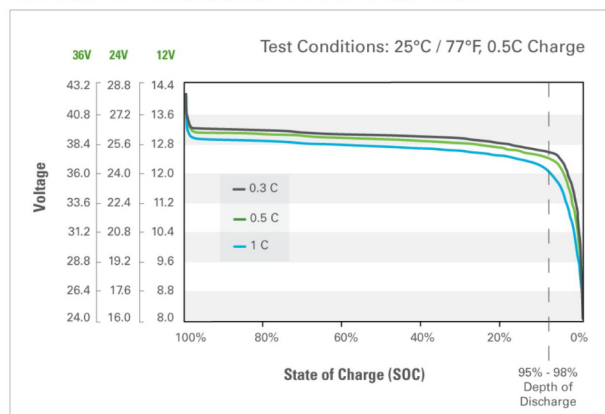
FAST CHARGING AT .5C (2HR) TO 1C (1HR)



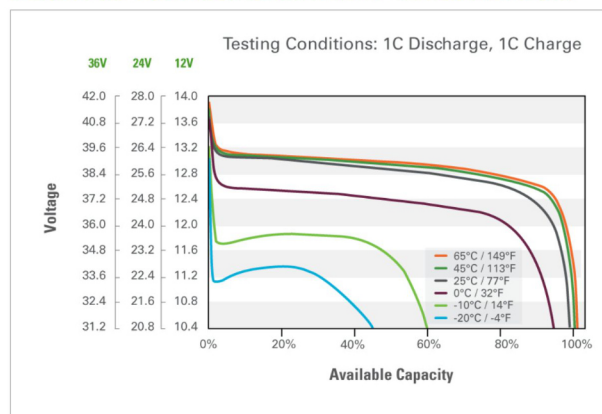
STANDARD TO LOW RATE CHARGING AT .2C (5HR) TO .5C (2HR)



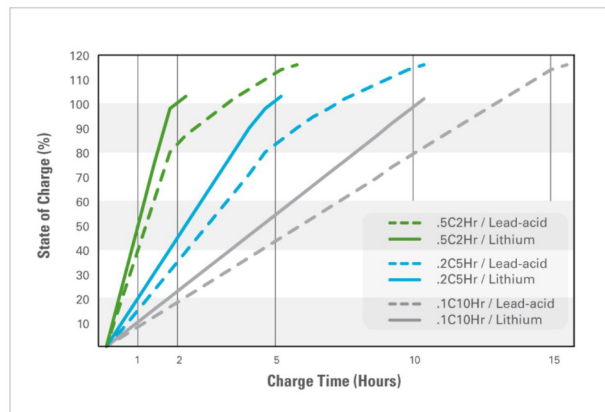
VOLTAGE IN RELATION TO RATE OF DISCHARGE



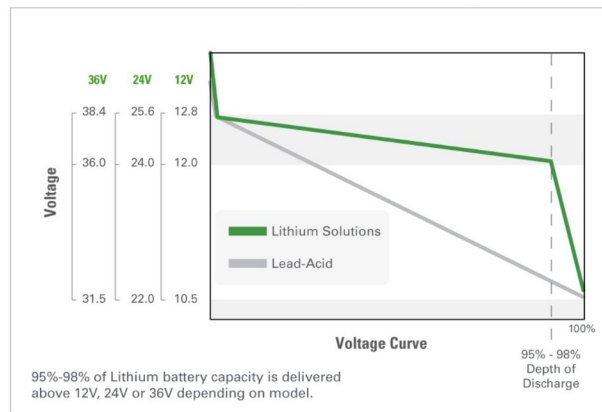
DISCHARGE VOLTAGE AND CAPACITY VS. TEMPERATURE



CHARGE PERFORMANCE (LITHIUM VS LEAD)



DISCHARGE PERFORMANCE (LITHIUM VS LEAD)



CAUTION:

Direct connection to DC motors without proper safety protection, motor controllers, and external motor voltage clamping systems (such as high power anti-parallel diodes or braking resistor systems) may result in damage to the internal pack protection system which may result in unsafe situations. Please consult Discover technical support before directly connecting any motor loads.

IGR POWER

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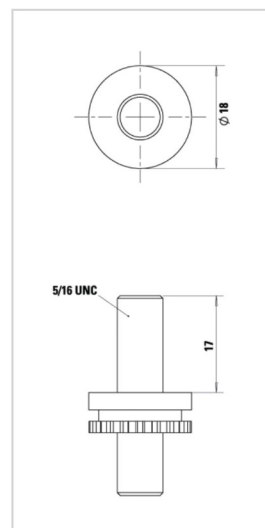
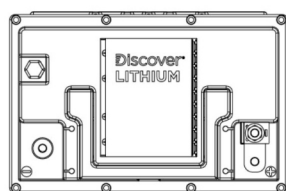
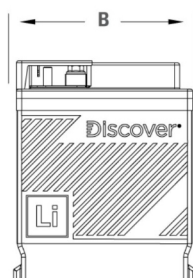
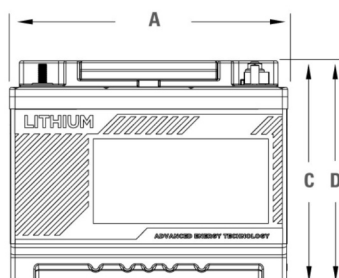


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MECHANICAL DRAWINGS



TERMINAL

MECHANICAL SPECIFICATIONS

Industry Reference	BCI: Low G24R DIN: Tall H6 JIS: D26L	
Length A (in/mm)	10.3	262
Width B (in/mm)	6.9	175
Height C (in/mm)	8.3	210
Total Height D (in/mm)	8.3	210
Weight (lbs/kgs)	26	11.8
Terminal*	ST 5/16	
Cell(s)	4S1P	
Case Material	UL94-V0 PBT/PC	
IP Rating	67	
Electrolyte	LiFePO ₄	

*TERMINAL TORQUE: 13 Nm / 9.6 ft-lb

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PERFORMANCE SPECIFICATIONS

Nominal Energy (kWh)	1.28
Useable DoD	100%
Rated Wh Capacity (1C)	1280
Rated Ah Capacity (1C)	100

Minutes of Discharge				
@25A	@56A	@75A	@85A	@100A
240	107	80	70	60

FEATURES

BLUETOOTH APP

- State of Charge
- Voltage / Current
- Temperature °F/°C

HIGH-CURRENT BMS

- Field replaceable fuse protection

BENEFITS

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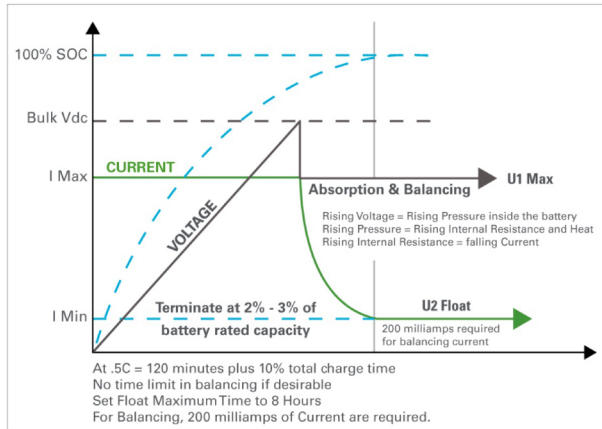
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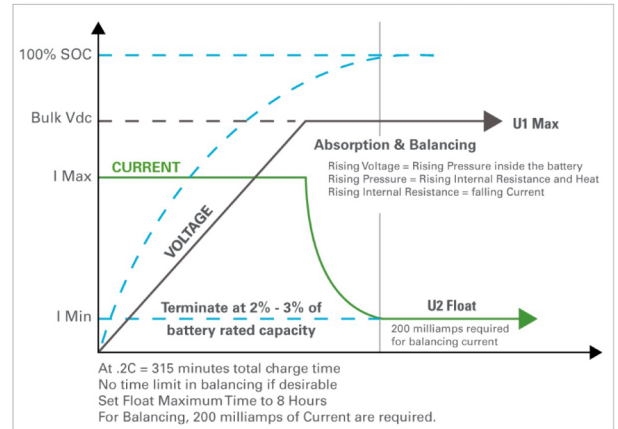
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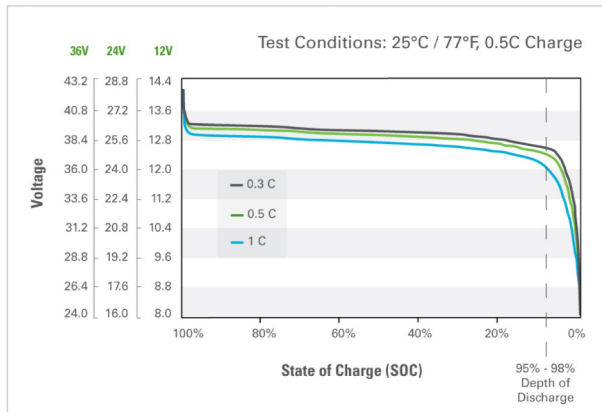
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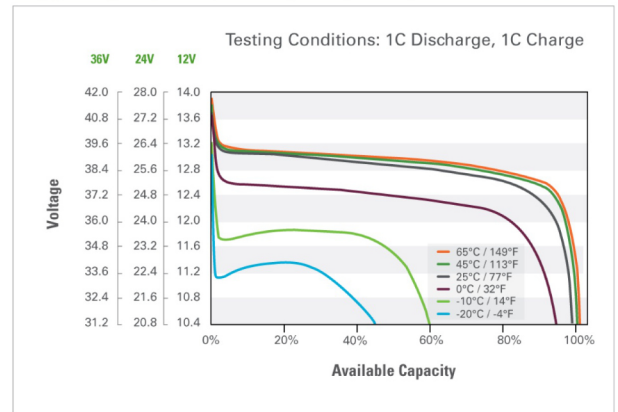
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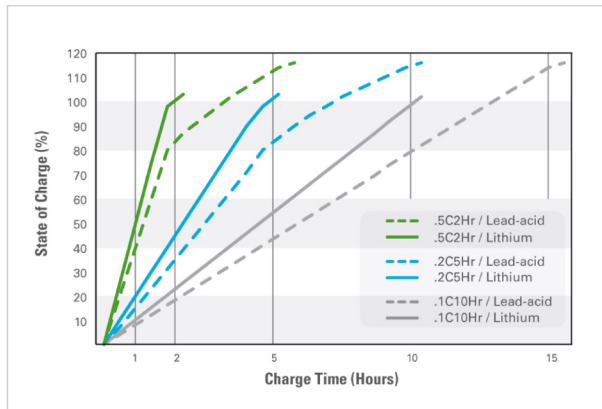
VOLTAGE IN RELATION TO RATE OF DISCHARGE



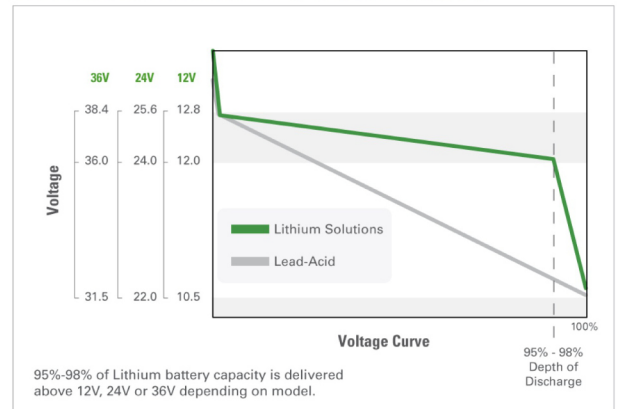
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